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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,323	02/06/2004	Katsuji Satomi	L8462.04105	4519

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EXAMINER

WENDLER, ERIC J

ART UNIT	PAPER NUMBER
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2824

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,323

Applicant(s)

SATOMI ET AL.

Examiner

Eric Wendler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12/1/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/1/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Updated search history.

DETAILED ACTION

1. This action is responsive to the following communications: the Amendment filed on December 1, 2005.
2. Claims 1-13 are pending in the application. Claims 1 and 11 are independent claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by the US Patent to Yamaguchi (5,297,078).**
5. **With regards to claim 11**, Yamaguchi teaches, in Fig. 3, a word line drive circuit including a drive transistor QN1 disposed between a positive power supply and a word line. When the drive transistor is turned OFF, the voltage of the word line is increased. The booster circuit acts as a word-line-voltage increasing circuit by increasing the potential of the word line when the drive transistor is turned OFF. The transistor QN2 will be ON when transistor QN1 is OFF, so it can be said that transistor QN2 acts as a switch to control the booster circuit when it is in the ON state, is provided between a power supply voltage Vcc, and causes a voltage higher than that of power supply voltage Vcc (namely Vw1) to be supplied to the word line. Therefore, the combined

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effect of transistor QN2 acting with the booster circuit is that of a switch circuit that performs the claimed functions (column 4, lines 63-68; column 5, lines 1-45).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Yamaguchi (5,297,078) in view of the US Patent to Hidaka (6,816,418).**

With regards to claim 12, Yamaguchi teaches all the claimed elements as mentioned above but fails to explicitly teach the inclusion of a level conversion circuit which changes a signal to a voltage higher than the supply voltage. Hidaka teaches a switch circuit (Figure 19, 32; column 22, lines 13-67, column 23, lines 1-8) that includes a level conversion circuit (Figure 21, 32b; column 23, lines 36-67) which changes a signal to a voltage higher than the supply voltage. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use circuitry similar to the switch circuit 32 and level conversion circuit 32b of Hidaka in a system similar to that described by Yamaguchi as another way to increase the potential on the word line.

8. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Yamaguchi (5,297,078) in view of the US Patent to Nakayama et al. (5,371,705).**

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9. **With regards to claim 13**, Yamaguchi teaches all the claimed elements as mentioned above except that the switch circuit responds to the signal only when writing. Nakayama teaches, in Figure 23, 902, and column 24, lines 52-58, that the X and Z level shift circuits 904, 905 containing switch circuits are connected to the output of the write voltage generating circuit 902, and responding to the signal only in writing. It would have been obvious to one of ordinary skill in the art, at the time of the invention, implement switch circuits similar to those taught by Nakayama in circuitry similar to that taught by Yamaguchi to respond to the signal only in writing in order to prevent data corruption in reading.

Further motive to perform the above stated modifications in claims 12 and 13 are evidenced by the fact that Yamaguchi, Nakayama and Hidaka are from the same field of endeavor as they are all trying to raise and lower voltages in semiconductor memory devices in order to improve reliability.

Response to Arguments

10. Applicant's arguments with respect to claim 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wendler whose telephone number is (571) 272-5063. The examiner can normally be reached on Monday - Friday 8AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EJW

1/26/06

12. The indication of claims 2-6 and 8-10
in the previous office action
as being allowable is maintained
for the reasons previously set
forth. Similarly, claim 1 is
allowable as the previously
stated objection has been overcome.

 2/6/06

RICHARD ELMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2500